

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number:	09/786.635B
Source:	1FW16.
Date Processed by STIC:	9/20/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER

VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND

TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS.

http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (http://www.uspto.gov/ebc/efs/downloads/documents.htm, EFS Submission User Manual ePAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box-1450, Alexandria, VA 22313-1450
- U.S. Patent and Trademark Office, 220 20th Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202

Revised 05/17/04



IFW16

RAW SEQUENCE LISTING DATE: 09/20/2004
PATENT APPLICATION: US/09/786,635B TIME: 16:18:10

Input Set: A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\I786635B.raw

```
5 <120> TITLE OF INVENTION: ATP binding cassette genes and proteins for diagnosis
            and treatment of lipid disorders and inflammatory
            diseases
    7
    9 <130> FILE REFERENCE: ATP binding cassette genes and protein
--> 11 <140> CURRENT APPLICATION NUMBER: US/09/786,635B
 -> 12 <141> CURRENT FILING DATE: 2001-05-22
   14 <150> PRIOR APPLICATION NUMBER: 101706
   15 <151> PRIOR FILING DATE: 1998-09-25
   17 <160> NUMBER OF SEQ ID NOS: 54
   19 <170> SOFTWARE: PatentIn Ver. 2.0
   21 <210> SEQ ID NO: 1
   22 <211> LENGTH: 6880
                                                                    8 Not Comply
   23 <212> TYPE: DNA
   24 <213> ORGANISM: Human
    26 <220> FEATURE:
                                                          The Was Spirit Market of Spirite was a some
   27 <223> OTHER INFORMATION: cDNA of ABCA1 (ABC1)
   29 <400> SEQUENCE: 1
   30 caaacatgtc agctgttact ggaagtggcc tggcctctat ttatcttcct gatcctgatc 60
    31 totgttoggo tgagotacco accotatgaa caacatgaat gocattttoc aaataaagco 120
   32 atgccctctg caggaacact tccttgggtt caggggatta tctgtaatgc caacaacccc 180
   33 tgtttccgtt acccgactcc tggggagget cccggagttg ttggaaactt taacaaatcc 240
    34 attgtggctc gcctgttctc agatgctcgg aggcttcttt tatacagcca gaaagacacc 300
   35 agcatgaagg acatgcgcaa agttctgaga acattacagc agatcaagaa atccagctca 360
    36 aacttgaage tteaagattt eetggtggae aatgaaaeet tetetgggtt eetgtateae 420
    37 aacetetete teecaaagte taetgtggae aagatgetga gggetgatgt catteteeae 480
    38 aaqqtatttt tqcaaqqcta ccagttacat ttgacaagtc tgtgcaatgg atcaaaatca 540
   39 gaagagatga ttcaacttgg tgaccaagaa gtttctgagc tttgtggcct accaagggag 600
    40 aaactggctg cagcagagcg agtacttcgt tccaacatgg acatcctgaa gccaatcctg 660
    41 agaacactaa actotacato tocottocog agoaaggago tggoogaago cacaaaaaca 720
   42 ttgctgcata gtcttgggac tctggcccag gagctgttca gcatgagaag ctggagtgac 780
   43 atgcgacagg aggtgatgtt tctgaccaat gtgaacagct ccagctcctc cacccaaatc 840
   44 taccaggctg tgtctcgtat tgtctgcggg catcccgagg gaggggggct gaagatcaag 900
   45 teteteaact ggtatgagga caacaactae aaageeetet ttggaggeaa tggeaetgag 960
   46 gaagatgetg aaacetteta tgacaactet acaacteett actgeaatga tttgatgaag 1020
   47 aatttggagt ctagtcctct ttcccgcatt atctggaaag ctctgaagcc gctgctcgtt 1080
   48 gggaagatcc tgtatacacc tgacactcca gccacaaggc aggtcatggc tgaggtgaac 1140
    49 aagacettee aggaactgge tgtgtteeat gatetggaag geatgtggga ggaacteage 1200
   50 cccaagatct ggaccttcat ggagaacagc caagaaatgg accttgtccg gatgctgttg 1260
   51 gacagcaggg acaatgacca cttttgggaa cagcagttgg atggcttaga ttggacagcc 1320
    52 caagacateg tggegttttt ggecaageae eeagaggatg teeagteeag taatggttet 1380
    53 gtgtacacct ggagagaagc tttcaacgag actaaccagg caatccggac catatctcgc 1440
    54 ttcatggagt gtgtcaacct gaacaagcta gaacccatag caacagaagt ctggctcatc 1500
```

3 <110> APPLICANT: Bayer AG

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/786,635B

DATE: 09/20/2004 TIME: 16:18:10

Input Set : A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\I786635B.raw

55	aacaagtcca	tggagctgct	ggatgagagg	aagttctggg	ctggtattgt	gttcactgga	1560
56	attactccag	gcagcattga	gctgccccat	catgtcaagt	acaagatccg	aatggacatt	1620
57	gacaatgtgg	agaggacaaa	taaaatcaag	gatgggtact	gggaccctgg	tectegaget	1000
58	gacccctttg	aggacatgcg	gtacgtctgg	gggggcttcg	cctacttgca	ggatgtggtg	1/40
59	gaggagggaa	tcatcagggt	gctgacgggc	accgagaaga	aaactggtgt	ctatatgcaa	1000
60	cagatgccct	atccctqtta	cqttqatqac	atctttctgc	gggtgatgag	ccggtcaatg	1860
61	cccctcttca	tgacgctggc	ctqqatttac	tcagtggctg	tgatcatcaa	gggcarcgrg	1920
62	tatgagaagg	aggcacggct	gaaagagacc	atgcggatca	tgggcctgga	caacagcatc	1980
63	ctctggttta	actaattcat	tagtageete	attectette	ttgtgagcgc	tggeetgeta	2040
64	ataatcatca	tgaagttagg	aaacctqctq	ccctacagtg	atcccagcgt	ggtgtttgtc	2100
65	ttcctatcca	tatttactat	ggtgacaatc	ctqcaqtgct	tectgattag	cacactcttc	2160
66	treagares	acctggcage	agectataga	ggcatcatct	acttcacgct	gtacctgccc	2220
60	tacatactat	atatagcata	gcaggactac	gtgggcttca	cactcaagat	cttcgctagc	2280
Q /	etactetete	ctataacttt	tagatttage	tataaatact	ttqccctttt	tgaggagcag	2340
60	gggattggag	tacaataaaa	caacctgttt	gagagtcctg	tggaggaaga	tggcttcaat	2400
70	ggcaccggag	coatctccat	gatgetgttt	gacaccttcc	tctatqqqqt	gatgacctgg	2460
70	togattgagg	ctatetttee	aggccagtac	ggaattccca	ggccctggta	ttttccttgc	2520
71	cacactgagg	actootttoo	cgaggaaagt	gatgagaaga	accaccctag	ttccaaccag	2580
72	accaageeet	gagaaatete	catogaddad	gaagegaeee	acttgaagct	gggcgtgtcc	2640
73	adyagaacac	tagaaacccg	ctaccaaat	gggatgaagg	taactatcaa	tggcctggca	2700
74	atteagaace	atgaggggg	catcacctcc	ttcctgggc	acaatggagc	ggggaagacg	2760
75	cigaacitit	destrotoso	caaattatta	cccccgacct	caaacaccac	ctacatcctg	2820
70	accaccatge	tteactetaa	catgaccacc	at.ccggcaga	acctgggggt	ctgtccccag	2880
77	ggaaaagaca	tatttaagat	gatgagtate	gaagaacaca	tctggttcta	tgcccgcttg	2940
70	cataacgtgt	atasassaca	catasaaaca	gagatggagc	agatggccct	ggatgttggt	3000
19	adagggetet	ggaggagga	aaggaaaag	agccagctgt	caggtggaat	gcagagaaag	3060
80	etatetee	gcaagccgaa	tatcaaaaa	totaaggttg	tcattctqqa	tgaacccaca	3120
0.7	ctatetgtgg	accettacte	cacadaga	atataggage	toctoctoaa	ataccgacaa	3180
0.2	getggtgtgg	ttattctctc	tacacaccac	atggatgaag	cogacatect	gggggacagg	3240
03	ggeegeacea	tataggatag	gaagetotoc	tatatagact	cctccctqtt	tetgaagaac	3300
84	attgecatea	gaggetage	gaagetgtgt	atcaagaaag	atgtggaatc	ctccctcagt	3360
85	cagergggaa	caggeracia	cactatata	tacctgaaaa	aggaggacag	tgtttctcag	3420
86	teetgeagaa	atagtagtag	adacaacaac	catgagagtg	acacactaac	catcgatgtc	3480
87	agcagttetg	argerggeer	gggcagcgac	atatataaaa	cccaactaat	ggaagacata	3540
88	tetgetatet	teaacticat	caygaagcat	gegeetgaag	addaddaadc	ctttgtggaa	3600
89	gggcatgage	tgacctatgt	gergeratat	gaageegeea	tttctagtta	ctttgtggaa tggcatctca	3660
90	etettteatg	tagarryarya	attesteaa	gaccegggea	agagt ggggt	ggatgctgag	3720
91	gagacgaccc	tggaagaaat	acceceage	geggeegaag	cettedada	caagcagagc	3780
92	acctcagatg	gtaccttgcc	agcaagacga	actaggeggg	atgattctga	catagaccca	3840
93	tgtettegee	cgtttactga	agatgatgct	atagataga	aagggteeta	ccaggtgaaa	3900
94	gaatccagag	agacagaccc	gereageggg	acggatggca	ggaagagact	ccaggtgaaa gctaattgcc	3960
95	ggctggaaac	ttacacagea	ttttastasa	attatata	caactatatt	gctaattgcc	4020
96	agacggagto	ggaaaggatt	estaganga	tttgggaagt	acccaacct	tgtctgcatt	4080
97	geeettgtgt	teageetgat	egigedaded	atanganata	accetageee	ggaacttcag	4140
98	ccctggatgt	acaacgaaca	gtacacattt	greageaacg	tagagagagag	ggacacggga	4200
99	accetggaac	tcttaaacgc	ccccaccaaa	gaccetgget	ra pagagaceeg	ctgtatggaa	a 4260
10	0 ggaaaccca	a tcccagaca	e gecetgeea	g gcaggggag	y aayaytyya	c cactgcccc	a 4320
10	1 gttccccag	a ccatcatgg	a cotottoca	g aargggaac	ic gyacaatyc	a gaacccttc	a 4380
10	2 cctgcatgc	c agtgtagca	g cgacaaaat	c aagaagatg	a caratata	g tececcagg	g 4440
10	3 gcaggggg	c tgaataata	c acaaagaaa	a caaaacact	g cagacacco	t tcaggacct	30

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/786,635B

DATE: 09/20/2004 TIME: 16:18:10

Input Set: A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\I786635B.raw

```
104 acaggaagaa acatttcgga ttatctggtg aagacgtatg tgcagatcat agccaaaagc 4500
105 ttaaagaaca agatctgggt gaatgagttt aggtatggcg gcttttccct gggtgtcagt 4560
106 aatactcaag cacttcctcc gagtcaagaa gttaatgatg ccaccaaaca aatgaagaaa 4620
107 cacctaaagc tggccaagga cagttctgca gatcgatttc tcaacagctt gggaagattt 4680
108 atgacaggac tggacaccag aaataatgtc aaggtgtggt tcaataacaa gggctggcat 4740
109 gcaatcaget ettteetgaa tgteatcaac aatgeeatte teegggeeaa eetgeaaaag 4800
110 ggagagaacc ctagccatta tggaattact gctttcaatc atcccctgaa tctcaccaag 4860
111 cagcagetet cagaggtgge teegatgace acateagtgg atgteettgt gteeatetgt 4920
112 gtcatctttg caatgtcctt cgtcccagcc agctttgtcg tattcctgat ccaggagcgg 4980
113 gtcagcaaag caaaacacct gcagttcatc agtggagtga agcctgtcat ctactggctc 5040
114 totaattttg totgggatat gtgcaattac gttgtccctg ccacactggt cattatcatc 5100
115 ttcatctgct tccagcagaa gtcctatgtg tcctccacca atctgcctgt gctagccctt 5160
116 ctacttttgc tgtatgggtg gtcaatcaca cctctcatgt acccagectc ctttgtgttc 5220
117 aagatteeea geacageeta tgtggtgete accagegtga acetetteat tggcattaat 5280
118 ggcagcgtgg ccacctttgt gctggagctg ttcaccgaca ataagctgaa taatatcaat 5340
119 gatateetga agteegtgtt ettgatette ceacattttt geetgggaeg agggeteate 5400
120 gacatggtga aaaaccaggc aatggctgat gccctggaaa ggtttgggga gaatcgcttt 5460
121 gtgtcaccat tatcttggga cttggtggga cgaaacctct tcgccatggc cgtggaaggg 5520
122 gtggtgttet teeteattae tgttetgate eagtaeagat tetteateag geocagaeet 5580
123 gtaaatgcaa agctatctcc tetgaatgat gaagatgaag atgtgaggcg ggaaagacag 5640
124 agaattettg atggtggagg ccagaatgac atettagaaa tcaaggagtt gacgaagata 5700
125 tatagaagga ageggaagee tgetgttgae aggatttgeg tgggeattee teetggtgag 5760
126 tgctttgggc tcctgggagt taatggggct ggaaaatcat caactttcaa gatgttaaca 5820
127 ggagatacca ctgttaccag aggagatgct ttccttaaca gaaatagtat cttatcaaac 5880
128 atccatgaag tacatcagaa catgggctac tgccctcagt ttgatgccat cacagagctg 5940
129 ttgactggga gagaacacgt ggagttettt geeettttga gaggagteee agagaaagaa 6000
130 gttggcaagg ttggtgagtg ggcgattcgg aaactgggcc tcgtgaagta tggagaaaaa 6060
131 tatgctggta actatagtgg aggcaacaaa cgcaagetet etacagecat ggetttgate 6120
132 ggcgggcctc ctgtggtgtt tctggatgaa cccaccacag gcatggatcc caaagcccgg 6180
133 cggttcttgt ggaattgtgc cctaagtgtt gtcaaggagg ggagatcagt agtgcttaca 6240
134 totoatagta tggaagaatg tgaagotott tgcactagga tggcaatcat ggtcaatgga 6300
135 aggttcaggt gccttggcag tgtccagcat ctaaaaaaata ggtttggaga tggttataca 6360
136 atagttgtac gaatagcagg gtccaacccg gacctgaagc ctgtccagga tttctttgga 6420
137 cttgcatttc ctggaagtgt tccaaaagag aaacaccgga acatgctaca ataccagctt 6480
138 ccatcttcat tatcttctct ggccaggata ttcagcatcc tctcccagag caaaaagcga 6540
139 ctccacatag aagactactc tgtttctcag acaacacttg accaagtatt tgtgaacttt 6600
140 gccaaggacc aaagtgatga tgaccactta aaagacctct cattacacaa aaaccagaca 6660
141 gtagtggacg ttgcagttct cacatctttt ctacaggatg agaaagtgaa agaaagctat 6720
142 gtatgaagaa teetgtteat aeggggtgge tgaaagtaaa gagggaetag aettteettt 6780
143 gcaccatgtg aagtgttgtg gagaaaagag ccagaagttg atgtgggaag aagtaaactg 6840
144 gatactgtac tgatactatt caatgcaatg caattcaatg
146 <210> SEQ ID NO: 2
147 <211> LENGTH: 2201
148 <212> TYPE: PRT
149 <213> ORGANISM: Human
151 <220> FEATURE:
152 <223> OTHER INFORMATION: Peptide sequence of ABCA1 (ABC1)
154 <400> SEQUENCE: 2
155 Met Pro Ser Ala Gly Thr Leu Pro Trp Val Gln Gly Ile Ile Cys Asn
```

RAW SEQUENCE LISTING DATE: 09/20/2004
PATENT APPLICATION: US/09/786,635B TIME: 16:18:10

Input Set: A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\I786635B.raw

156					5					10					15	
158	Ala	Asn	Asn	Pro	Cys	Phe	Arg	Tyr	Pro	Thr	Pro	Gly	Glu	Ala	Pro	Gly
159				20					25					30		
161	Val	Val	Gly	Asn	Phe	Asn	Lys	Ser	Ile	Val	Ala	Arg	Leu	Phe	Ser	Asp
162			35					40					45	•		
164	Ala	Arq	Arg	Leu	Leu	Leu	Tyr	Ser	Gln	Lys	Asp	Thr	Ser	Met	Lys	Asp
165		50	-				55			•	•	60			•	-
	Met	Ara	Lvs	Val	Leu	Ara	Thr	Leu	Gln	Gln	Ile	Lvs	Lvs	Ser	Ser	Ser
168	65	5	-1-			70					75		-1-			80
		T.611	Luc	T211	Gln		Dhe	T. 11	Val	Men		Glu	Thr	Dhe	Ser	
171	ADII	шси	L) S	Deu	85	11Dp	1110	JCu	141	90	11011				95	01,
	Dha	Lou	Ti er	uic		Lou	Çar	Lau	Dró	-	Car	Thr	Va 1	Men		Met ·
	PHE	шец	111	100	Mall	Deu	Der	ъęи	105	цуз	DET	1111	VCL	110	пув	IIC C
174	.	3	81.		17 3	T1.	T	***		1101	Dha	T 0	C1 ~		TDs 430	Cln.
	Leu	Arg		Asp	vai	11e	rea		Lys	var	Pne	теп		Gry	TYL	GIII
177		•	115	1	_	_	_	120		_	_	-	125	~-7		
	Leu		Leu	Thr	Ser	Leu		Asn	Gly	ser	ьys		Glu	GIU	мет	TTE
180		130					135		_			140				
182	Gln	Leu	Gly	Asp	Gln	Glu	Val	Ser	Glu	Leu		Gly	Leu	Pro	Arg	
	145					150					155					160
185	Lys	Leu	Ala	Ala	Ala	Glu	Arg	Val	Leu	Arg	Ser	Asn	Met	qaA	Ile	Leu
186					165					170					175	
188	Lys	Pro	Ile	Leu	Arg	Thr	Leu	Asn	Ser	Thr	Ser	Pro	Phe	Pro	Ser	Lys
189				180					185					190		
191	Glu	Leu	Ala	Glu	Ala	Thr	Lys	Thr	Leu	Leu	His	Ser	Leu	Gly	Thr	Leu
192			195					200					205	_		
194	Ala	Gln	Glu	Leu	Phe	Ser	Met	Arq	Ser	Trp	Ser	Asp	Met	Arq	Gln	Glu
195		210					215	,				220		_		
	Val		Phe	Leu	Thr	Asn		Asn	Ser	Ser	Ser		Ser	Thr	Gln	Ile
	225	•••				230	,				235					240
		Gln	Δla	Val	Ser			val.	Cys	Glv		Pro	Glu	Glv	Glv	
201	-1-	01	,,,,,,,	• • • •	245	9	110	, 41	C7.5	250	*****		024	-	255	U-7
	Len	Luc	τlα	Luc		T.pm	Acn	Trn	Tyr		Agn	Δen	Men	Tur		Δl =
203	пец	цуа	116	260	JCI	Dea	Voii	пр	265	GIU	пор	LOII	11011	270	цуз	ALU
	Lou	pho	C11.		Aan	~7··	Thr	cl.,	Glu	7.00	777	G7.11	Thr		Tur	Nan
	Беп	Pile	_	GTA	MSII	GIY	1111		Gru	MSP	мта	GIU		PHE	TYL	dan
207	3	a	275	ml	D	m	G	280	3	T	N/ 4-	*	285	T	41	0
			THE	THE	PIO	Tyr	-	ASII	Asp	Leu	Mer	_	ASII	ьец	GIU	ser
210		290	_	_	_		295		_		_	300	_	_	_	
		Pro	Leu	Ser	Arg		Пе	Trp	Lys	Ala		гÀг	pro	Leu	Leu	
213			_			310					315			_	_	320
215	Gly	Lys	Ile	Leu	Tyr	Thr	Pro	Asp	Thr	Pro	Ala	Thr	Arg	Gln	Val	Met
216					325					330					335	
218	Ala	Glu	Va1	Asn	Lys	Thr	Phe	Gln	Glu	Leu	Ala	Val	Phe	His	Asp	Leu
219				340					345					350		
221	Glu	Gly	Met	Trp	Glu	Glu	Leu	$\operatorname{\mathtt{Ser}}$	${\tt Pro}$	Lys	Ile	Trp	Thr	Phe	Met	Glu
222			355					360					365			
224	Asn	Ser	Gln	Glu	Met	Asp	Leu	Val	Arg	Met	Leu	Leu	Asp	Ser	Arg	Asp
225		370				-	375		J			380	_		_	-
	Asn		His	Phe	Tro	Glu		Gln	Leu	Asp	Glv		asA	Tro	Thr	Ala
228		L			- L-	390					395			· - L		400

RAW SEQUENCE LISTING DATE: 09/20/2004
PATENT APPLICATION: US/09/786,635B TIME: 16:18:10

Input Set : A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\I786635B.raw

230 231	Gln	Asp	Ile	Val	Ala 405	Phe	Leu	Ala	Lys	His 410	Pro	Glu	Asp	Val	Gln 415	Ser
233	Ser	Asn	Gly			Tyr	Thr	-	_		Ala	Phe	Asn			Asn
234	a1	- T	T 1 -	420	m1	T 1.	0		425	N	~1	C	u.l	430	T	7
236 237	GIN	АІа	435	Arg	Tnr	Ile	ser	Arg 440	Pne	мес	GIU	Cys	445	ASN	Leu	ASN
239	Lys	Leu	Glu	Pro	Ile	Ala	\mathbf{Thr}	Glu	۷al	Trp	Leu	Ile	Asn	Lys	Ser	Met
240		450					4 55					460				
		Leu	Leu	Asp	Glu	Arg	Lys	Phe	Trp	Ala		Ile	Val	Phe	Thr	
	465		_		_	470		_	_		475	1	_	_	_	480
	He	Thr	Pro	GLY		Ile	GIu	Leu	Pro		His	Val	ьуs	туr		rre
246	B =====	W-L	7	T1.	485	7	*** 1	~1	7.~~	490	n an	Tiro	тІо	Tara	495	C1.,
248	Arg	мес	Asp	500	Asp	Asn	val	Giu	505	THE	ASII	пλя	116	510	Asp	GIY
	Туг	Trn	Aen		Glv	Pro	Δra	Δla			Phe	Glu	Asn		Ara	Tvr
252	- y -	111	515	110	011	110	**** 9	520	пор	110	1110	O.L.	525	*****	5	-1-
	Val	Trp		Glv	Phe	Ala	Tvr		Gln	Asp	Val	Val	-	Gln	Ala	Ile
255		530	1	1		***	535			-		540				
257	Ile	Arg	Val	Leu	Thr	Gly	Thr	Glu	Lys	Lys	Thr	Gly	Val	Tyr	Met	Gln
258	545					550				_	555					560
260	Gln	Met	Pro	Tyr	Pro	Суѕ	Tyr	Val	Asp	Asp	Ile	Phe	Leu	Arg	Val	Met
261					565					570					575	
	Ser	Arg	Ser		Pro	Leu	Phe	Met		Leu	Ala	Trp	Ile		Ser	Val
264	_			580	_			-	585				_ •	590	_	
	Ala	Val		Ile	Lys	Gly	Ile		Tyr	Glu	Lys	GIu		Arg	Leu	Lys
267	C1	mb .c	595	7 ~~	*1.	Mah	<u>ما</u>	600	7 am	3	Com	T1.	605	There	Dha	C ~~
270	GIU	610	Met	Arg	ire	Met	615	ьeu	Asp	ASII	ser	620	Leu	пр	Pne	ser
	Trn		Tle	Ser	Ser	Leu		Pro	T.e11	T.e.11	Val		Δla	Glv	T.e.u	ī.eu
	625	1110	110	DCI	JCI	630	110	110	иси	шси	635	JCI	711u	GI,	11 C (4	640
		Val	Ile	Leu	Lvs	Leu	Glv	Asn	Leu	Leu		Tyr	Ser	qaA	Pro	
276					645		-			650		-		-	655	
278	Val	Val	Phe	Val	Phe	Leu	Ser	Val	Phe	Ala	Val	Val	Thr	Ile	Leu	Gln
279				660					665					670		
281	Cys	Phe	Leu	Ile	Ser	Thr	Leu	Phe	Ser	Arg	Ala	Asn	Leu	Ala	Ala	Ala
282			675					680					685			
	_		Gly	Ile	Ile	Tyr		Thr	Leu	Tyr	Leu		Tyr	Val	Leu	Cys
285		690	_		_	_	695	~			_	700				_
		Ala	Trp	Gln	Asp	Tyr	Val	Gly	Phe	Thr		Lys	He	Phe	Ala	
288		T	0	D	*** 1	710	Db -	01	ml	~ 1	715	a 3		D)	77.	720
	ьеп	цеи	ser		725	Ala	Pne	_	Pne	_	_	GIU	TYL		735	
291	Dha	Glu	Glu			Ile	Gly					\ en	T.611			
294	FIIE	Jiu	JIU	740	J.Y	1+0	OTA	VUI	745	ттЪ	₽₽₽	voii	ıψu	750	GIU	JET
	Pro	Val	Glu		Asp	Gly	Phe	Asn		Thr	Thr	Ser	Val		Met	Met
297			755			1		760					765			
	Leu	Phe		Thr	Phe	Leu	Tyr		Val	Met	Thr	Trp	Tyr	Ile	Glu	Ala
300	•	770	-				775	_				780	-			
302	Val	Phe	Pro	Gly	Gln	Tyr	Gly	Ile	Pro	Arg	Pro	Trp	Tyr	Phe	Pro	Cys

```
<210> 3
<211> 1130
<212> DNA
<213> Human
                                                                         See p. 7

for every

Aplanation

(n's need

Aplanation

in (2207-12237)

section)
<220>
<223> human cDNA of ABCB9
<400> 3
gccaatanca cggtttcatc atggaactcc aggacggcta cagcacagag acaggggaga 60
agggcgccca gctgtcaggt ggccagaagc agcgggtggc catggccgng gctctggtgc 120
ggaaccccc agtcctcatc ctggatgaag ccaccagege tttggatgee gagagegagt 180
atotgatoca goaggocato catggoaaco tgtoagaago acacggtact catcatogog 240
caccggctga gcaccgtgga gcacgcgcac ctcattgtgg tgctggacaa gggccgcgta 300
gtgcagcagg gcacccacca gcagcttgct tgccccaggg cgggctttta cggcaagct $\hat{\eta}$360
gttgcagcgg cagatgtggg gtttcaaggc cgcagacttc acagctggcc acaacgagcc 420
tgtagccaac gggtcacaag gcctgatggg gggcccctcc ttcgcccggt ggcagaggac 480
ceggtgeetg cetggeagat gtgeecaegg aggttteeag etgeectaee gageecagge 540
ctgcagcact gaaagacgac ctgccatgtc ccatgatcac cgcttntgca atcttgcccc 600
tggtccctgc cccattccca gggcactctt acccdninct gggggatgtc caagagcata 660
gteeteteee cataceeete cagagaaggg getteeetgt eeggagggag acaeggggaa 720
cgggattttc cgtctctccc tcttgccagc tctgtgagtc tggccagggc gggtagggag 780
egtggaggge atetgtetge caattgeeeg etgecaatet aageeagtet caetgtgaee 840
acacgaaacc tcaactgggg gagtgaggag ctggccaggt ctggaggggc ctcaggtgcc 900
cccageeegg caeeeagett tegeeeeteg teaateaace eetggetgge ageegeeete 960
cccacacccg cccctgtgct ctgctgtctg gaggccacgt ggaccttcat gagatgcatt 1020
ctcttctgtc tttggtgga🏗 gggatggtgc aaagcccagg atctggcttt gccagaggtt 1080
                                                                      1130
gcaacatgtt gagagaaccc ggtcaataaa gtgtactacc tcttacccct
```

The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

VARIABLE LOCATION SUMMARY

PATENT APPLICATION: US/09/786,635B

DATE: 09/20/2004 TIME: 16:18:11

Input Set : A:\LEA33298 - seq list 8-2004.txt Output Set: N:\CRF4\09202004\1786635B.raw

eva eplaration Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing. Use of <220> to <223> is MANDATORY if n's or Xaa's are present. in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:3; N Pos. 8,109,360,586,636,637,638,1040

Seg#:4; N Pos. 944,950,957,970,1001,1002,1003,1007

Seq#:13; N Pos. 4208,4210,4211,4212,4227,4228,4229,4231,4253,4677,4691,4707

Seq#:13; N Pos. 4721,4752,4754,4772,4773

Seq#:20; N Pos. 5,2909

Seq#:25; N Pos. 1963

Seq#:31; N Pos. 856,1009,1128,1314,1326,1328,1343,1345,1346,1378,1415,2477

Seq#:31; N Pos. 2540

Seq#:54; N Pos. 856,1009,1128,1314,1326,1328,1343,1345,1346,1378,1415,2477

Seq#:54; N Pos. 2540

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/786,635B

DATE: 09/20/2004 TIME: 16:18:11

Input Set : A:\LEA33298 - seq list 8-2004.txt
Output Set: N:\CRF4\09202004\1786635B.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:579 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:3 L:579 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:3 L:579 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0 M:341 Repeated in SeqNo=3 L:623 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:4 L:623 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:4 L:623 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:900 M:341 Repeated in SeqNo=4 L:1205 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:13 L:1205 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:13 L:1205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:4200 M:341 Repeated in SeqNo=13 L:1577 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:20 L:1577 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:20 L:1577 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0 M:341 Repeated in SeqNo=20 L:1720 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:25 L:1720 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:25 L:1720 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:1920 L:1986 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:31 L:1986 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:31 L:1986 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31 after pos.:840 M:341 Repeated in SeqNo=31 L:2289 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:54 L:2289 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:54 L:2289 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:840 M:341 Repeated in SeqNo=54